

Claims

1. Process for the reduction and control of the hexafluorosilicate concentration during the polishing of glass articles in a polishing bath containing sulfuric acid and hydrofluoric acid, characterised in that, during and/or after the polishing operation, potassium fluoride, potassium sulfate, sodium fluoride, sodium sulfate and/or aluminium sulfate is added to the polishing bath and/or the sulfuric acid washing bath in quantities such that a reduction in the concentration of fluoride ions below the optimum operating range is avoided.
2. Process according to claim 1, characterised in that, when potassium sulfate, sodium sulfate or aluminium sulfate is added, the zinc ions present in the polishing bath and/or in the sulfuric acid washing bath are, for the most part, co-precipitated as zinc sulfate.
3. Process according to claims 1 and 2, characterised in that potassium fluoride or  $K_2SO_4$ ,  $Na_2SO_4$  or NaF is added to the polishing bath.
4. Process according to one of the above claims, characterised in that potassium sulfate and/or aluminium sulfate is added to the sulfuric acid washing bath.
5. Process according to one of the above claims, characterised in that, after the polishing operation, the addition of the metal fluoride and/or the metal sulfate is performed in a working vessel, settling vessel or storage vessel.
6. Process according to one of the above claims, characterised in that air, preferably filtered air, is addi-

tionally blown into the polishing bath and/or the sulfuric acid washing bath.

7. Process according to one of the above claims, characterised in that oxalic acid and/or potassium oxalate is additionally added to the polishing bath, preferably 0.05 to 1 g per litre polishing bath/batch for a batch size of between 150 and 500 glasses.
- 5 8. Process according to one of the above claims, characterised in that 2 to 10 g, preferably 2.5 to 4.5 g, of the metal fluoride or 3 to 15 g, preferably 5 to 8 g, of the metal sulfate per litre of polishing bath or sulfuric acid washing bath are added to the polishing bath or sulfuric acid washing bath for a batch size of between 150 and 500 glasses.
- 10 15 9. Process according to claim 8, characterised in that 2 to 10 g of the metal fluoride or 3 to 15 g of the metal sulfate per litre of polishing bath are added to a polishing bath containing 45 to 65 wt.% sulfuric acid and 0.8 to 3.6 wt.% hydrofluoric acid, preferably 2 to 5 g of the metal fluoride or 5 to 8 g of the metal sulfate, particularly preferably 2.5 to 4.5 g potassium fluoride.
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